REMARKS

I. Introduction

Claims 1, 2, 4, 7, 11, 12, 14, 17, 18, and 21 are pending and are rejected. Claims 1 and 11 are amended. Claims 3, 5, 6, 8, 9, 10, 13, 15, 16, 19, and 20 have been previously cancelled. Claims 1 and 11 are the only independent claims.

II. The Claims are Allowable

A. The §112 Rejections are Traversed

Claims 1-2, 4, 7, 11-12, 14, 17-18 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claims 1-2,4, 7, 11-12, 14, 17-18 and 21 are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 11 are amended as follows: "and without consideration of ~~alternative actions or maintenance~~ a length of time of actuation of the close button to effect closure of the barrier." Support for these recitations can be found in at least paragraphs [0021] and [0035] of the published application. These paragraphs disclose that the "close only" button 26 "when activated will cause garage door 14 to close if it is already open" and that actuating a close only button causes the door the close. There is no specification that the actuation of the close only button be held for any specific amount of time and hence this functionality occurs without consideration of a length of time that the close button is actuated. This amendment also removes the alternative language objected to by the Examiner. For these reasons, we request that the rejection over 35 U.S.C. §112 be withdrawn.

B. The §103 Rejections are Traversed

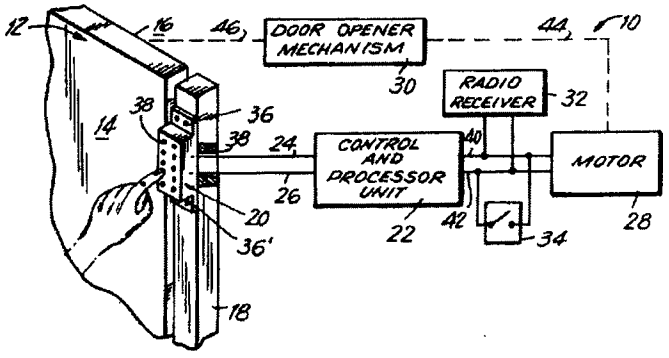
1. Kaplan teaches away from combination with Michel or Heitschel such that one skilled in the art would not modify Kaplan as claimed.

Claims 1-2, 4, 11-12, and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,408,251 to Kaplan in combination with U.S. Patent No. 5,656,900 to Michel. Claims 1-2, 4, 11-12, and 14 were also rejected under 35 U.S.C. §103(a) as being unpatentable over Kaplan in combination with U.S. Patent No. 5,576,670 to Heitschel. We understand the Examiner to be relying upon the Michel and Heitschel

references to show wireless communication. Although both references disclose use of wireless communications in barrier operator systems, one skilled in the art would not modify Kaplan to include wireless communication between the keypad and controller as suggested by the Examiner when studying the teachings of Kaplan as a whole nor in view of the teachings of Michel and/or Heitschel.

Kaplan

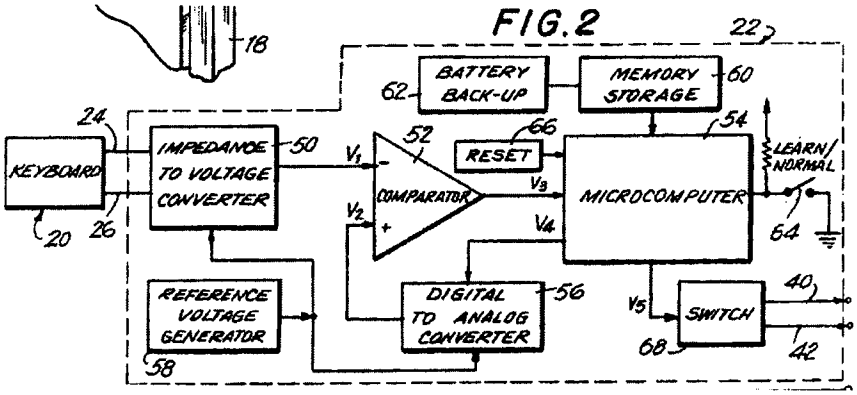
Kaplan describes a security system for a garage that is designed to be tamper-resistant. As shown in FIG. 1 of Kaplan (reproduced below for the convenience of the Examiner), a keypad 20 is coupled by control wires 24 and 26 to a control and processor unit 22. The control and processor unit 22 is not mounted with the keypad 20 but is mounted in the interior of the garage. See Kaplan Abstract and col. 4, lined 66-67. The control and processor unit 22 is also connected to a motor 28. An optional radio receiver 32 may transmit a control signal from the output of the control and processor unit 22 to the motor 28. See Kaplan col. 5, lines 27-35. The keypad 20, however, always uses a wired connection with the control and processor unit 22 to prevent tampering.



More specifically, Kaplan's wired connection between the keypad 20 and the control and processor unit 22 is central to its operation. Kaplan discloses a couple of different methods for communicating between the keypad 20 and the control and processor unit 22. In one embodiment, Kaplan operates by creating an analog signal when a button is pressed by the user based on resistors built into the device and determining whether the sequence of button presses results in an expected pattern of resistances. See Kaplan, col. 5, line 46 through col. 6, line 34. To sense resistances, the control and processor unit 22 must be connected by wires 24 and 26 to the keypad 20 as shown in FIG. 1 above.

Kaplan discusses that the resistances may be translated into voltages and that the voltages are used by the system to determine whether and how to move a barrier. See Kaplan, col. 6, line 67 through col. 10, line 3 discussing the embodiment of FIG. 2 included below. This entire embodiment of Kaplan, however, assumes that the resistance signals have

already been transmitted from the keyboard 20 via wires 24 and 26 to the control and processor unit 22. For instance, the transformation from resistances to voltages occurs at the impedance-to-voltage converter 50 that is located in the control and processor unit 22. See Kaplan col. 7, lines 9-12 et al. and FIG. 2. Such a system could not operate wirelessly between the keyboard 20 and the control and processor unit 22.



By another approach disclosed by Kaplan, the system determines whether an appropriate submission is received by sensing the length of time of the switch closures. See Kaplan, col. 6, lines 44-66, col. 10, lines 4-29, and FIG. 5 reproduced below for the Examiner's convenience. This embodiment again is looking at switch assertions only after a signal generated by the switch assertion has been received by the control unit 22'. As shown in FIG. 5, the keyboard 20c switch is connected to the control unit 22' via wires 24 and 26. Kaplan teaches that the control unit 22' senses the impedance across the wires 24 and 26 to sense the timing of the closure sequence to determine whether the sequence matches an expected sequence. See Kaplan, col. 6, lines 46-54. This impedance determination cannot be performed wirelessly.

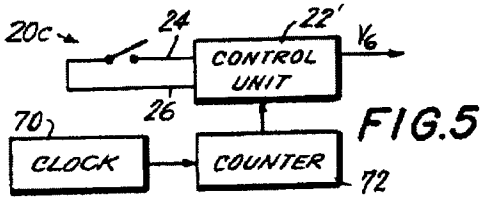


FIG.5

Moreover, the Kaplan reference summarizes its disclosure with an explanation of the benefits of the two-wire connection between the keypad and the controller:

> The transmission of a predetermined coded signal sequence over a two-wire line deters intruder interference, since he cannot compromise system security by gaining access to the two control wires. Only by depressing the correct switches within a defined time interval will the garage door be opened

> and/or closed. Breaking, shorting, or impressing external voltages or currents into the two-wire line will not activate the door. Inasmuch as only two control wires are necessary to transmit the coded signals no matter how many switches are located on the keyboard, the system can be easily retrofitted to any existing installation.

Kaplan, col. 10, line 64 through col. 11, line 7.

Accordingly, the Kaplan reference, when read as a whole, teaches specifically and directly away from providing wireless communication between the keypad of a security system and a controller for a barrier of the system. Kaplan also teaches specifically that only specific sequences or types of key presses will work to actuate the system; either by looking for specific sequences of resistances and/or by looking for a specific timing of button presses. Thus, modification of the Kaplan system to operate wirelessly between the keypad of a security system and a controller for a barrier of the system would result in a fundamental change in the operation of the device taught by Kaplan. See MPEP Section 2143.01, Section VI, "THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE" page 2100-141. A fundamental change to a device is not an obvious modification that would be within the scope of one skilled in the art.

In contrast, the entry control systems recited in claims 1 and 11 include the controller's being "operably and wirelessly coupled to the entry request device and the close button." For the reasons discussed above, the systems taught by Kaplan cannot simply include wireless communication between the keypad and the controller.

Examiner's Position and Our Response

The Examiner's response to the above argument is as follows:

> The argument that Kaplan teaches away from the combination with Tolson or Heitschel is incorrect because Kaplan includes wireless communication that suggests the combination.
>
> This argument is not persuasive because Kaplan includes a radio receiver to receive codes from a transmitter. The prior art in col. 1 lines 37-57 of Kaplan includes wired coupling that is easily tampered with by shorting the wires. The invention of Kaplan reduces such tampering by using a coded signal sequence responsive to keypad/keyboard operation. The wireless link would also provide coded signals that would avoid the problem of tampering by shorting a wired link. Heitschel and Michel disclose such a transmitter also including a keypad.
>
> Applicant states that receiver 32 of Kaplan may transmit a control signal from control unit 22 to motor 28. This is incorrect. Kaplan does disclose

> a radio receiver 32 to generate a command signal to open and close the door upon detection of an appropriate radio signal from a wireless radio transmitter (col. 5 lines 27-37). The receiver 32 generates a control signal and is therefor considered to be a controller similar to control unit 22 that also generates a control signal.

Office action of March 5, 2009 at 10. The passage cited by the Examiner is as follows:

> The optional radio receiver 32 is connected in parallel across the output conductors 40, 42. The receiver 32 is conventional, and is operative for generating a command signal, analogous to the aforementioned output control signal, which is conducted to the motor 28 to activate the mechanism 30 and, in turn, to open and/or close the door 12 upon the detection of an appropriate radio signal from a non-illustrated wireless radio transmitter. Such transmitters are typically either hand-held portable devices, or are generally located inside the automobile to be parked in the garage.

Kaplan at col. 5, lines 27-37. The Examiner is missing a distinguishing feature: that the operating signal received by the optional radio receiver 32 is coming from a different transmitter that is not the key pad that requires a wired connection to the control unit 22 as explained in Kaplan. Kaplan is silent about the operating characteristics of the non-illustrated transmitter, and thus, Kaplan does not suggest that a wireless connection is possible for its disclosed key pad.

Next the Examiner states that Kaplan fails to teach away from wireless communication for its keypad as follows:

> Wireless communication would not be a fundamental change in view of Kaplan expressly disclosing wireless communication. Further, col. 6 lines 35-43 of Kaplan clearly states that the keyboard generated "coded signals" are not limited to resistance levels, but may include any combination of resistors, inductors or capacitor. The examiner contends that such would correspond to frequency generating circuits such as RF oscillators. This section of Kaplan also refers to using voltage references corresponding to amplitude modulated RF signals.

Office action of March 5, 2009 at 11. Here the Examiner is analogizing the specific communication structure disclosed in Kaplan to other signaling known in the art. Kaplan's teachings, however, are specifically drawn to impedances, voltage references, or current sources, each of which must be transmitted by a wired connection, not frequency generating circuits as contended by the Examiner:

> It will be understood that the keyboard generation of coded signals is not intended to be limited solely to generating different resistance levels. For example, the switched impedances can be real or complex, and can consist of

> resistors, inductors or capacitors, or any combination thereof. A plurality of voltage references, e.g. zener diodes, or current references, e.g. constant current sources, could also be used in place of the impedances.

Kaplan at col. 6, lines 35-43.

Other References

The teachings of Michel and Heitschel fail to explain or show how such a modification of the basic operation of Kaplan would be obviously performed by one skilled in the art. For instance, Michel discloses a "permanently mounted keypad radio transmitter 34 may also communicate with antenna 32 of the head unit to command the head unit to open and close the door." See Michel, col. 2, lines 45-48. Michel is completely silent regarding full closure of a barrier in response to a brief one-button press. This silence would not lead one skilled in the art to modify the fundamental operating principals of Kaplan to create entry control systems such as those recited in the claims.

With respect to the combination of the Michel teachings with the timing embodiment of Kaplan, claim 1 recites that "receipt of the close signal from the close button automatically causes the controller to issue a close barrier signal at the output in order to close the barrier without the need to authenticate any user authorization code and without consideration of a length of time of actuation of the close button to effect closure of the barrier." Claim 11 includes a similar limitation. Michel is silent on this point. The timing embodiment of Kaplan also requires specific timing of the switch closures to actuate. See Kaplan, col. 6, lines 44-66, col. 10, lines 4-29. Accordingly, neither Kaplan nor Michel teach the closure of a barrier in response to actuation of a close button regardless of the actuation time of the close button.

Heitschel discloses a keypad transmitter 25 and keypad unit 60 that respond to button presses by wirelessly transmitting coded information. The wirelessly transmitted coded information consists of, for example, registered code words or a binary code representation of a particular key press. See Heitschel, col. 6, line 44 through col. 7, line 35. Wireless transmission of codes as taught by Heitschel does not teach transmission of a resistance or timing to be sensed by the controller as taught by Kaplan. Mere suggestion that wireless transmission of coded information does not make it reasonable that one of skill in the art would modify the device of Kaplan to send resistance settings wirelessly against the express

teachings of Kaplan that a two wire connection is a preferred and secure method of communication between a keypad and a controller.

The Examiner's response to these arguments is dependent on the Examiner's position that Kaplan need not be restricted to only a wired configuration. We disagree with this position for the reasons stated above in response to the Examiner's position.

Because the combinations of Kaplan and Michel and Kaplan and Heitchel would not lead one skilled in the art to create systems such as those recited in claims 1 and 11, it is submitted that the rejections over Kaplan and Michel and Kaplan and Heitchel should be withdrawn. Claims 2, 4, and 7 depend from claim 1, and claims 12, 14, 17, 18, and 21 depend ultimately from claim 11. Because the rejections of claims 1 and 11 over Kaplan and Michel and Kaplan and Heitchel are not proper, it is submitted that the dependent claims are also allowable over this rejection.

2. Matsuoka, Ligman, Lee, and Apple fail to remedy the shortcomings of the art discussed above.

As mentioned, claims 7 and 17-18 were rejected under §103(a) as being unpatentable over Kaplan and Michel or Heitschel in combination with Matsuoka. Kaplan, Michel, and Heitschel have been described above. Matsuoka does not remedy the deficiencies of these references. In particular, Matsuoka describes a garage door apparatus and a button 12. The button 12 is hardwired to the operator, however, and not wirelessly connected as recited in claims 1 and 11. See FIG. 1 of Matsuoka. Consequently, because at least one claim element is not taught or suggested by either of the references, it is submitted that claims 7 and 17-18 are allowable over the proposed combination.

As also mentioned, claim 21 was rejected under 35 U.S.C. §103(a) as being unpatentable over Kaplan and Michel or Heitschel in combination with Ligman, Lee, or Apple. Kaplan, Michel, and Heitshel have been described above. Neither Ligman, Lee, nor Apple remedy the deficiencies of these references. In particular, Ligman teaches an entry system for an automobile. Ligman always uses wired connections and is silent as to any connection being wireless as recited in claim 11. Lee teaches a control circuit for a moveable barrier operator. Lee, however, is silent as to wireless communication between a keypad and the control circuit as recited in claim 11. Apple discloses "a single integrated circuit device which can be used in both the encoder and decoder sections of a remote control load

actuator." Apple at col. 2, lines 32-35. Apple, however, fails to suggest wireless communication between a keypad and the control circuit as recited in claim 11. Consequently, because at least one claim element is not taught or suggested by any of the references, it is submitted that claim 21 is allowable over the proposed combination.

IV. Conclusion

We believe that the application is in condition for allowance, and a favorable action is respectfully requested. The Commissioner is hereby authorized to charge any additional fees which may be required in this application to Deposit Account No. 06-1135.

Respectfully submitted,

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